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Quest - Quick User-directed Expression Search Tool
Release 5.4

-- Outline of search "pep1_ags" --

Selected search type is key against sequence data banks or files.
Selected scope is Sequence.
Selected sequence key from "collins496.key":
pep1 (AA) ID pep1 AA preliminary pattern
followed by
1 any character from 2 to 10 times
2 C
2 any character from 2 to 5 times
2 C
2 any character from 4 to 10 times
2 C
2 any character from 3 to 10 times
2 C
2 any character from 2 to 4 times
2 C
2 any character from 7 to 15 times
2 C
2 any character from 2 to 10 times

Selected files:
File : lectins.pep

-- Output Parameters --

Format Options:
Nucleic acid code matching Exact Indirect file
Find non-matching hits only No Sequence or key file
Report key used Yes List of hits
Note position of hit Yes Hit display
Display full annotations Yes Name and annotations
Sequence context 50

Run mode Batch
Time to start comparison now
Notify at end of run No

-----
999 matches found in sequence:
aab19645 ; Barley lectin BLC3.
(from "lectins.pep")
TOIG of: aab19645 check: 9725 from: 1 to: 212

ID AAB19645 standard; protein; 212 AA.
XX
AC AAB19645;
XX
DT 05-FEB-2001 (first entry)
XX
DE Barley lectin BLC3.
XX
KW Barley; lectin; Gramineae; transgenic plant; crop protection;
XX insect resistance; fungus resistance; insecticide; fungicide.
XX
OS Hordeum vulgare.
XX
Key Location/Qualifiers
XX 1. .26
FT Peptide /label= signal_peptide
FT Protein 27..197
FT /label= Mature_protein

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Peptide
198. .212
/Note= "this C-terminal peptide is removed in post-
translational processing"
206. .208
/Note= "Asn is N-glycosylated"
208
/Note= "encoded by ACT"
XX
PN US6127532-A.
XX
XX 03-OCT-2000.
XX
XX 13-FEB-1992; 92US-00836224.
XX
XX 12-SEP-1989; 89US-00406318.
XX
XX (UNMS ) UNIV MICHIGAN STATE.
XX
XX Raikhel NV;
XX
XX WPI; 2000-664154/64.
XX N-PSDB; AAA88642.
XX
XX New barley BLC3 lectin DNA, useful for encoding the Gramineae lectin in a
XX plant and providing insecticidal and fungicidal properties to the plant,
XX and for producing transgenic plants expressing the Gramineae lectin.
XX
XX Example 1; Fig 1; 23pp; English.
XX
XX The present sequence is that of barley lectin, as predicted from isolated
XX cDNA clone BLC3 (see AAA88642). Barley lectin is a vacuolar protein that
XX accumulates in developing embryos and in the root tips of adult plants.
XX Expression studies in transgenic tobacco showed that the BLC3 signal
XX peptide was correctly removed and that the polypeptide was glycosylated
XX via high mannose glycan at Asn-206. The glycan and C-terminal peptide
XX were removed before deposition of the mature protein in the vacuoles. The
XX invention also relates to a transgenic plant containing cDNA encoding
XX Gramineae lectin. The plants preferably contain cDNA coding for barley
XX lectin and store the lectin in the leaves. The transgenic plants,
XX particularly the leaves, exhibit insecticidal and fungicidal properties
XX
XX Sequence 212 AA;

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AAB19645 Length: 212 September 16, 2004 14:52 Type: P Check: 9725 ..
Found using 'pep1' (collins496.key)

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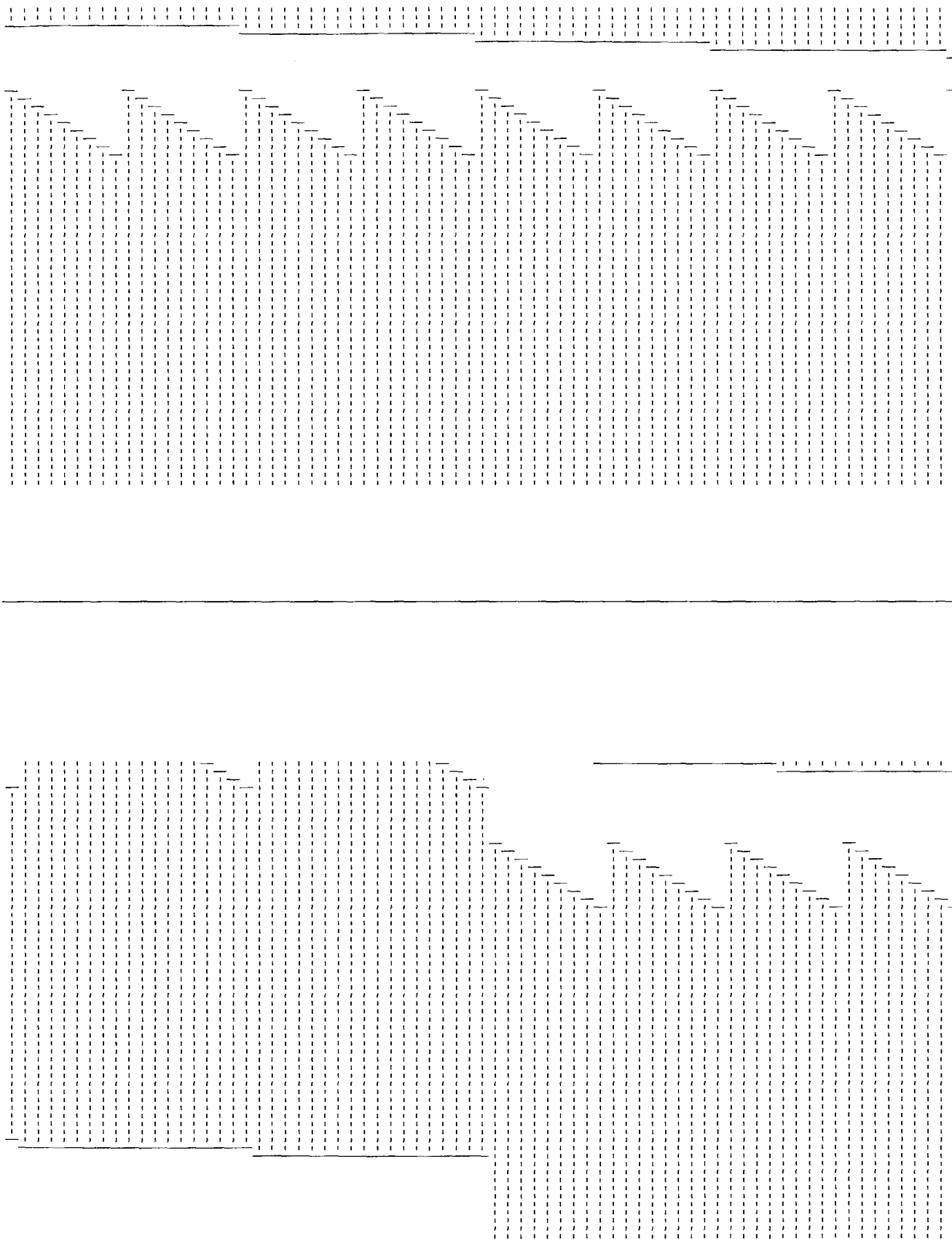


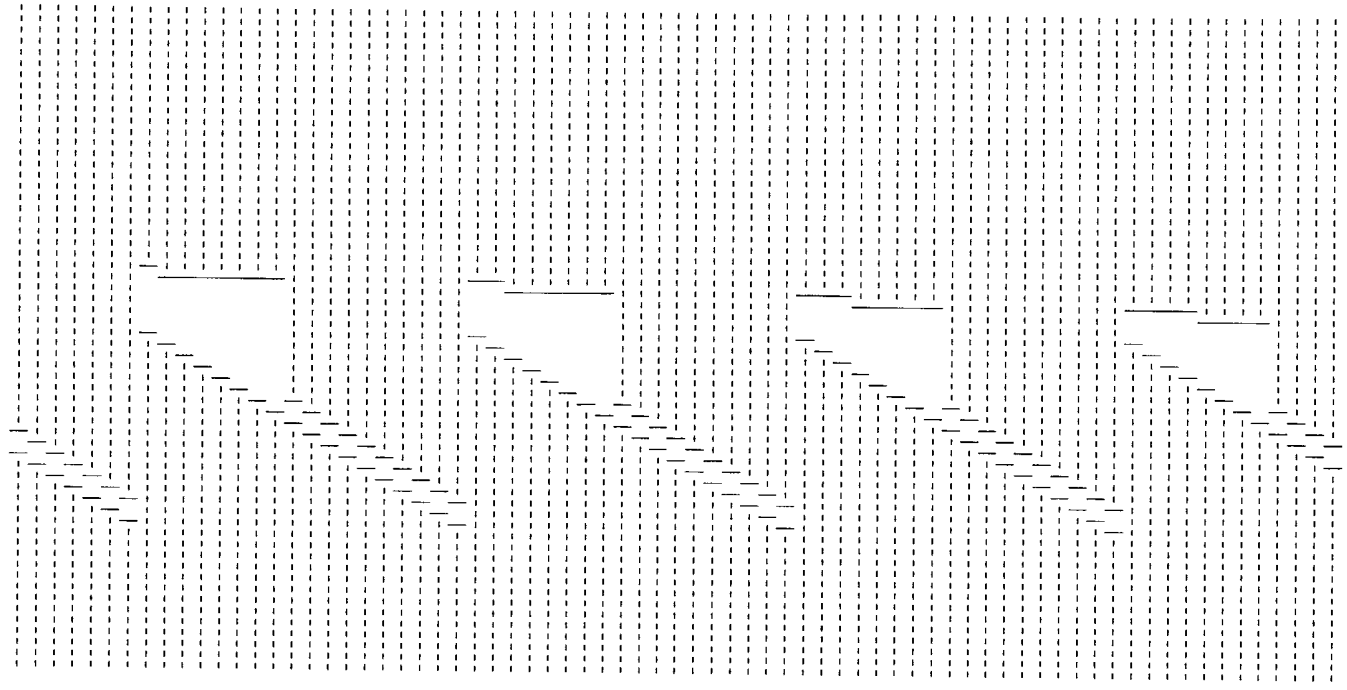
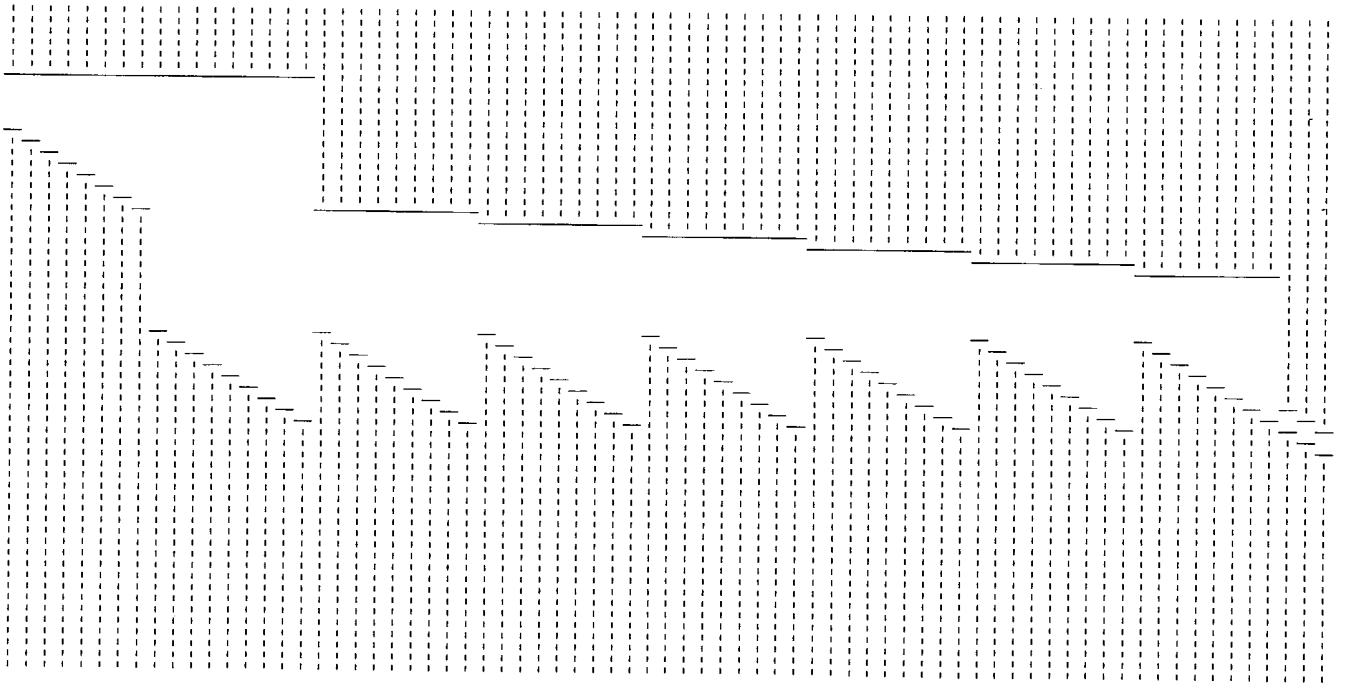














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CQNGACYTSKRCGTQAGGKTCPNNHCCSQWGYCGFGAEYCGAGCQGGPCRADIKCGSQAG

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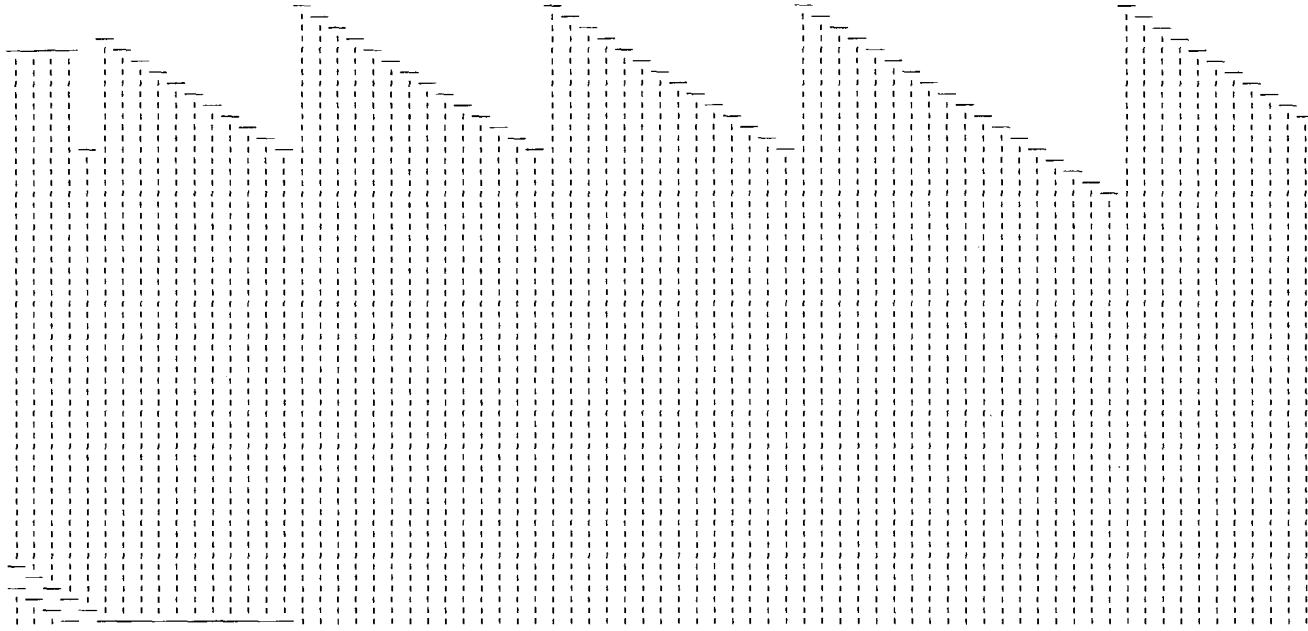
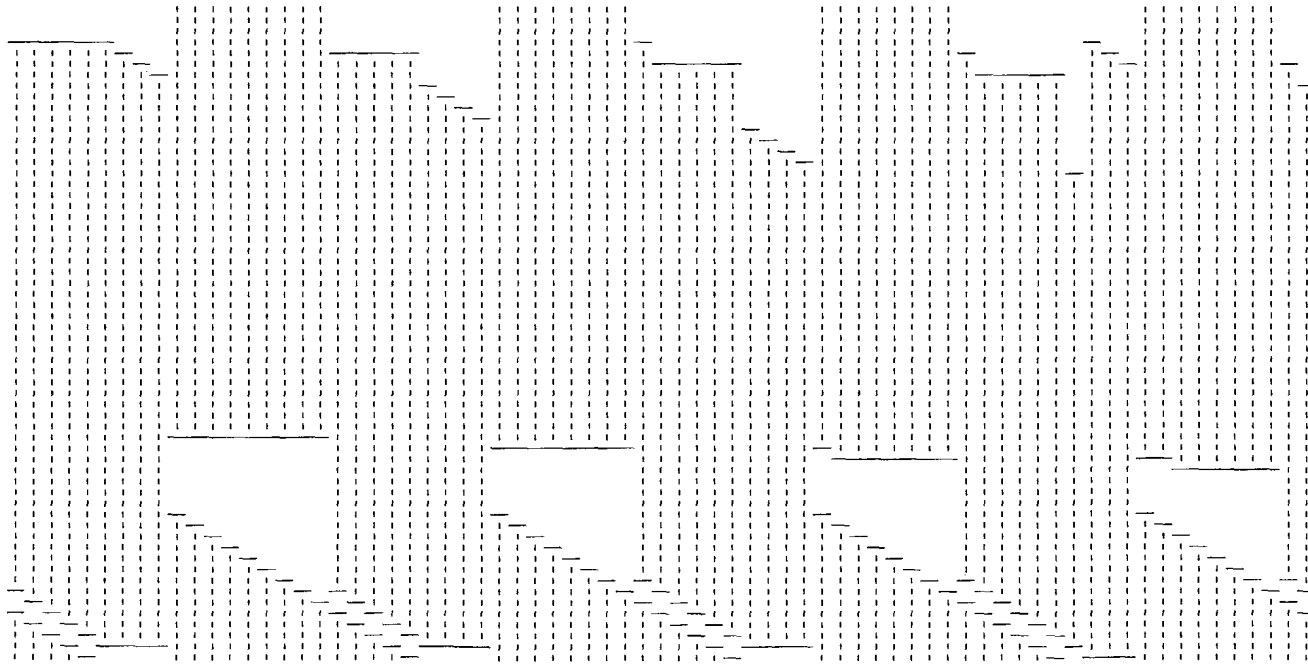
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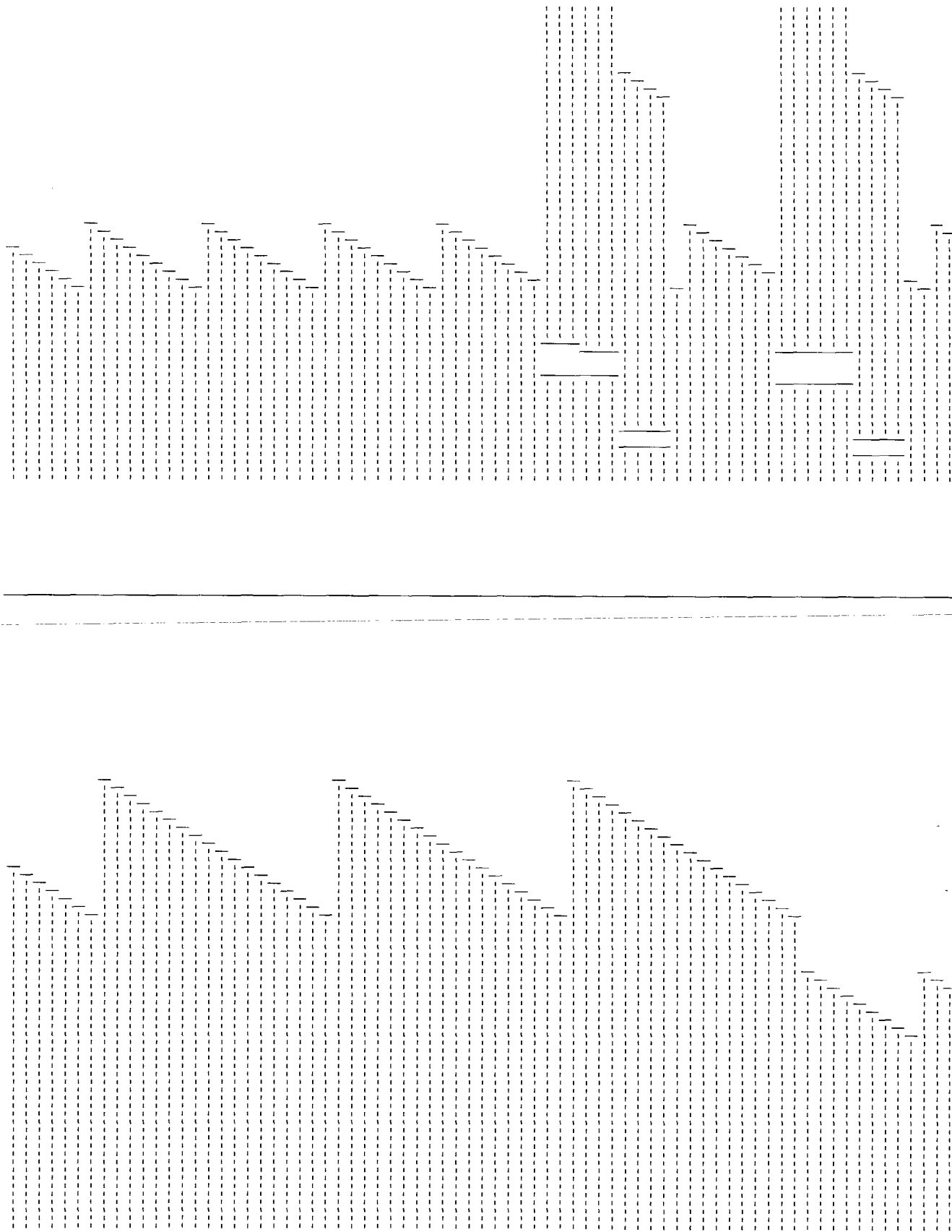
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121 GKLCPNNLCCSOWGYCGLGSEFCGEGCQGGACSTDKPCGKAAGGKVCTNNYCCSKWGS CG

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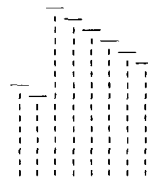
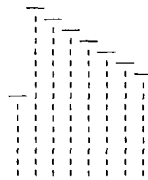
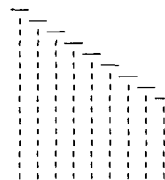
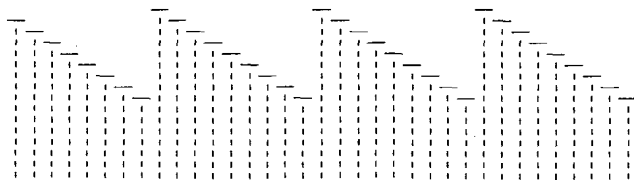
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90 matches found in sequence:

aap91386 ; Tobacco PR-R protein.  
(from "lectins.pep")  
TOIG of: aap91386 check: 5348 from: 1 to: 226

ID AAP91386 standard; protein; 226 AA.

XX AC AAP91386;

XX DT 27-AUG-2003 (revised)  
XX DT 25-MAR-2003 (revised)  
XX DT 24-JAN-1990 (first entry)

XX DE Tobacco PR-R protein.

XX KW Tobacco PR-R gene; herbicide resistance.

XX OS Nicotiana tabacum; Xanthi.

XX EN EP332104-A.

XX PD 13-SEP-1989.

XX PF 06-MAR-1989; 89EP-00103888.

XX PR 08-MAR-1988; 88US-00165667.

XX PR 06-FEB-1989; 89US-00305566.

XX PA (CIBA ) CIBA GEIGY AG.

XX PA (NOVS ) NOVARTIS AG.

XX PA (NOVS ) NOVARTIS-ERFINDUNGEN VERWALTUNGS GMBH.

XX PI Rvals J, Montoya A, Harms C, Duesing J, Sperisen C, Meins F;

XX PI Payne G;

XX DR WPI; 1989-265342/37.

XX DR N-FSDS; AAN90842.

XX PT Chemical induction of cloned genes in plants - DNA sequence and vectors  
XX PT and processes for inducible expression leading to herbicide and insect  
XX PT resistance.

XX PS Claim 78; Page 68; 117pp; English.

XX CC Sequence encodes tobacco PR-R protein. ( PR = pathogenesis-related). PR-R  
XX CC has a chemically inducible gene used to regulate transcription of an  
XX CC associated DNA sequence in plant tissue. The PR-R may be an inhibitor of

CC either proteases or alpha-amylases conferring insecticidal, viricidal or  
CC fungicidal activity to plants when expressed transgenically. The protein  
CC shows strong homology to a trypsin/alpha-amylase inhibitor isolated from  
CC maize. See also AAN90367, AAN90368, AAN90841-N90846, and AAP91383-P91386.  
CC (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to  
CC correct PA field.) (Updated on 27-AUG-2003 to correct OS field.)

XX

SQ Sequence 226 AA;

AAP91386 Length: 226 September 16, 2004 14:53 Type: P Check: 5348 ..

Found using 'pepl' (collins496.key)

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200  AYSYPODDFTSLTFCFSGTNYRVFCP
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999 matches found in sequence:
aar45357 : Barley clone BLC3 lectin.
(from "lectins.pep")
TOIG of: aar45357 check: 132 from: 1 to: 212

ID  AAR45357 standard; protein; 212 AA.
XX
XX  AAR45357;
AC
XX
XX  06-JUL-1994 (first entry)
DT
XX
XX  Barley clone BLC3 lectin.
DE
XX
XX  Transgenic plant; leaf; leaves; insecticidal; fungicidal; properties;
KW  tobacco; gramineae.
XX
XX  Hordeum vulgare.
OS
XX
XX  Key Location/Qualifiers
FH  Peptide 1..26
FT  Peptide /note= "putative signal peptide"
FT  Peptide 27..171
FT  Peptide /note= "mature peptide"
FT  Region 172..186
FT  Region /note= "carboxy terminal extension"
FT  Region 180..182
FT  Region /note= "potential asparagine-linked glycosylation site"
XX
XX  US5276269-A.
PN
XX
XX  04-JAN-1994.
PD
XX
XX  20-JUL-1992; 92US-00917665.
PF
XX
XX  12-SEP-1989; 89US-00406318.
PR
XX
XX  (UNMS ) UNIV MICHIGAN STATE.
PA
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XX  Raikhel NV;
DI
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XX  WPI; 1994-016167/02.
DR
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XX  N-PSDB; AAQ54431.
DR
XX
XX  Transgenic plant contg. cDNA encoding wheat or barley lectin - has
PT  insecticidal properties in its leaves.
XX
XX  Disclosure; Fig 1; 26pp; English.
PS
XX
XX  The sequence is that of a lectin encoded by barley cDNA clone BLC3 which
CC  may be expressed in transgenic plants to provide plants (pref. tobacco)
CC  having insecticidal and fungicidal properties in their leaves.
CC
XX
XX  Sequence 212 AA;
SQ

AAR45357 Length: 212 September 16, 2004 14:53 Type: P Check: 132 ..
Found using 'pepl' (collins496.key)
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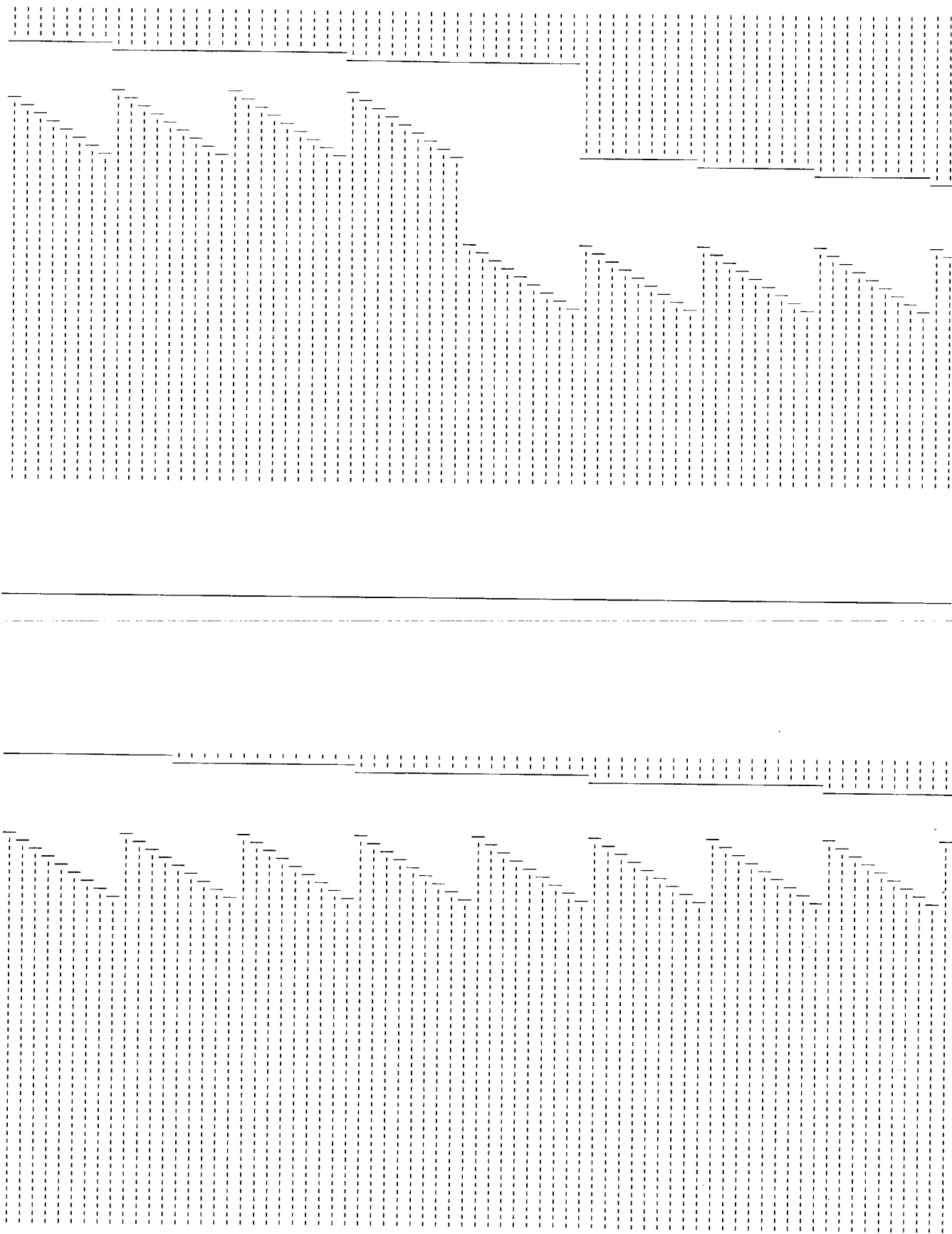


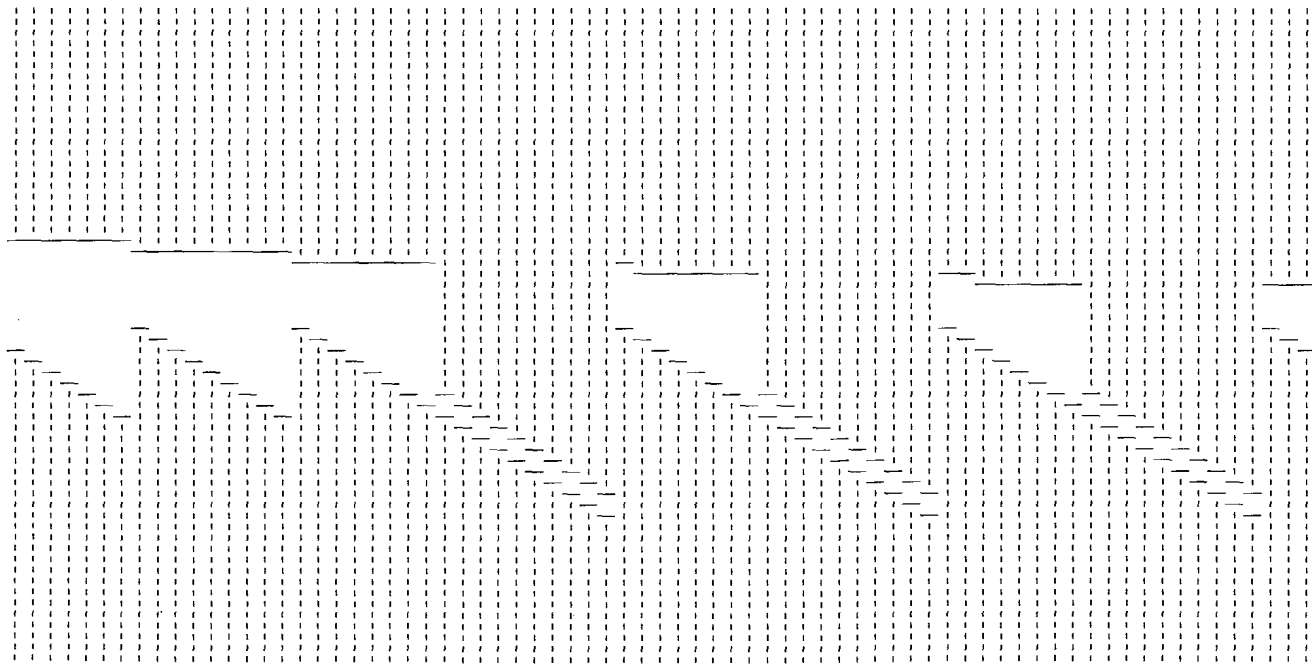
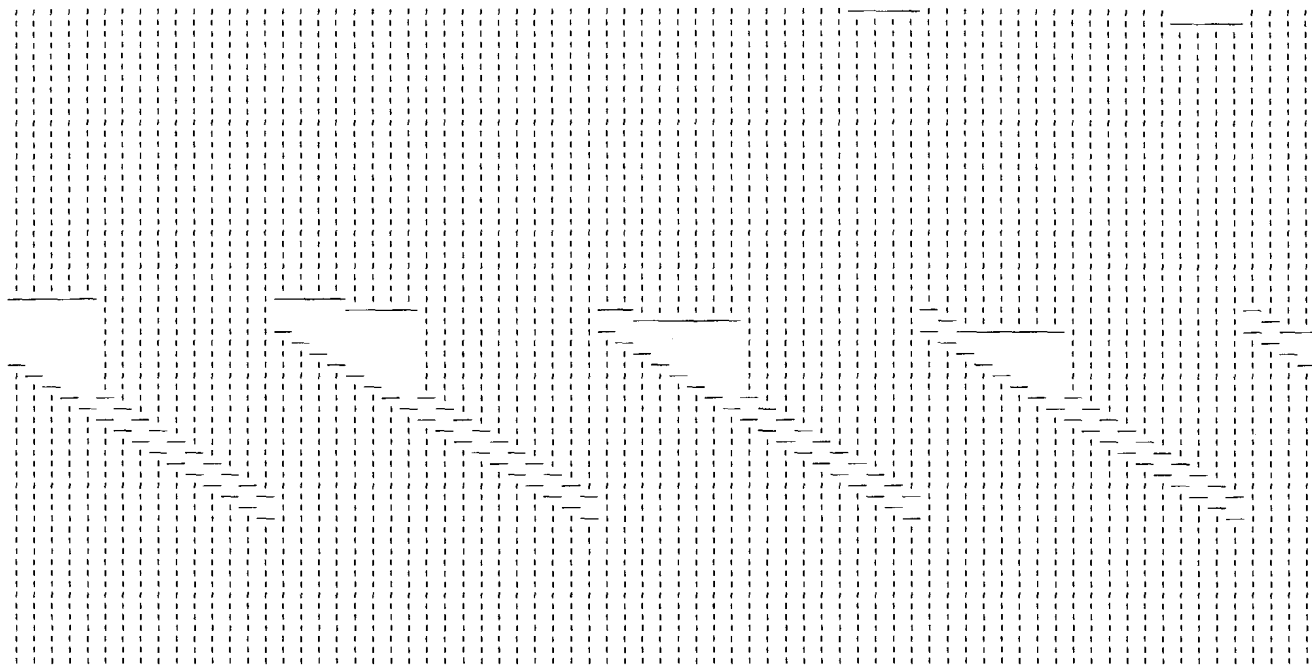










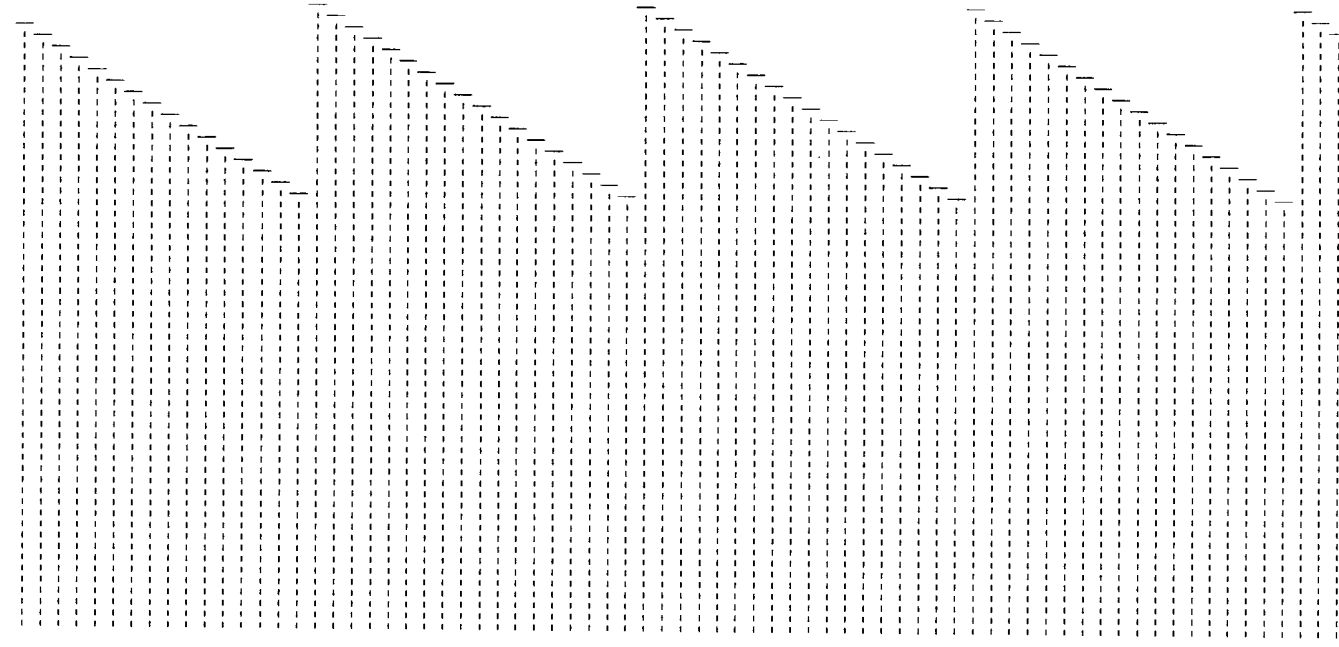
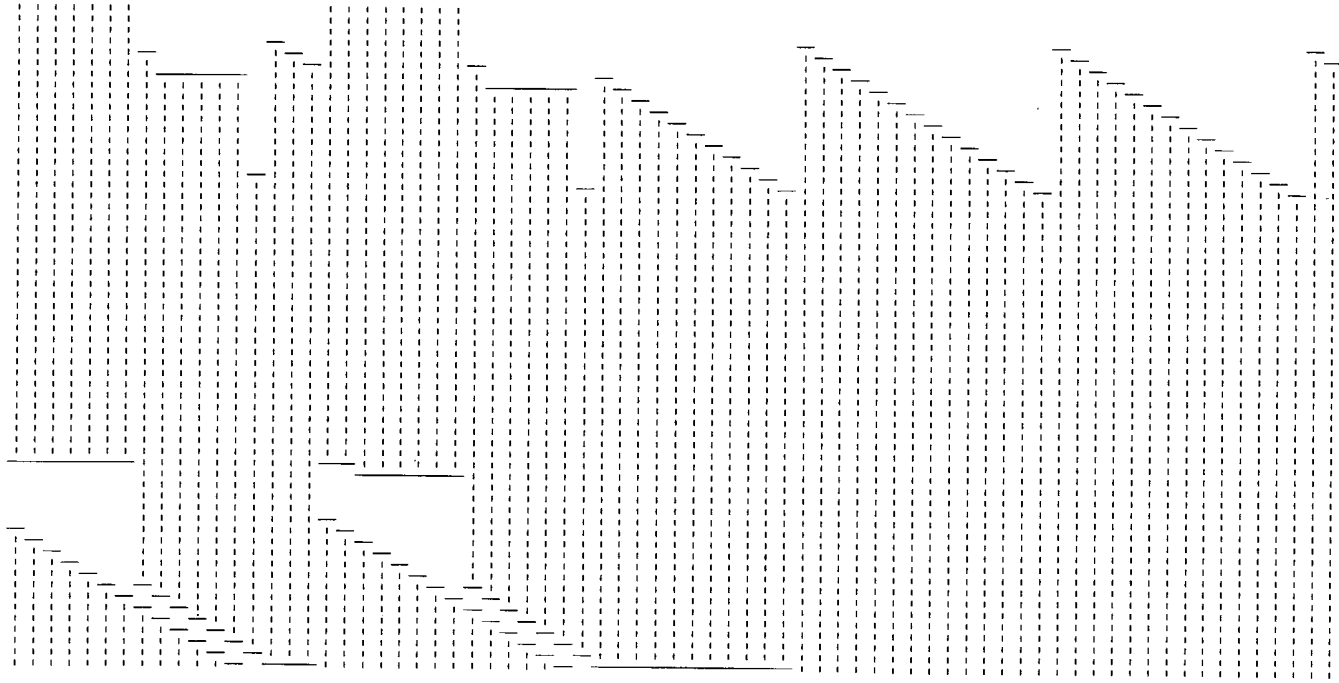




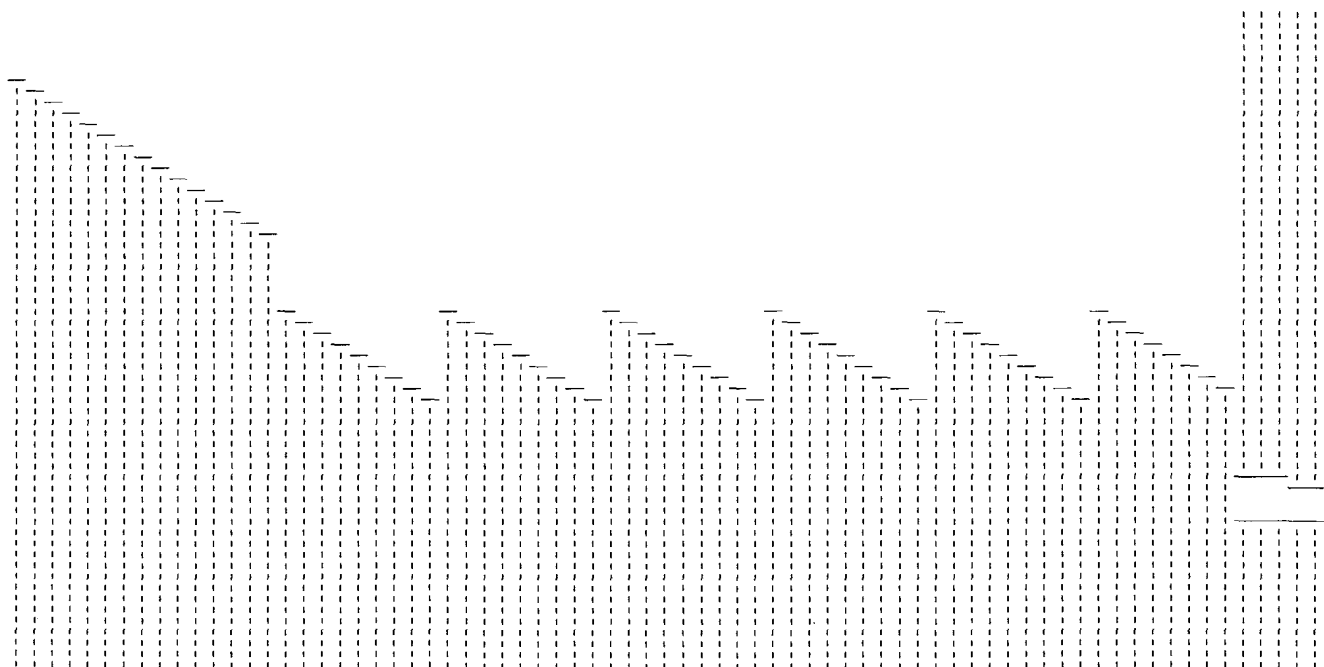
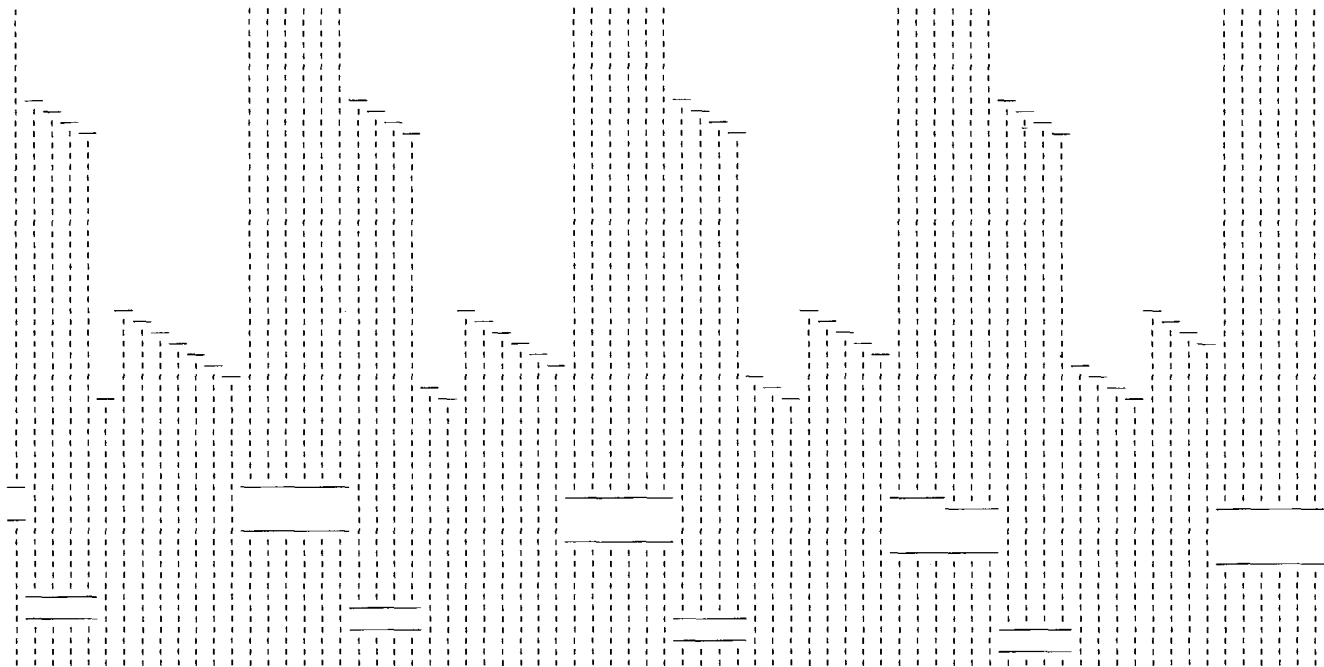








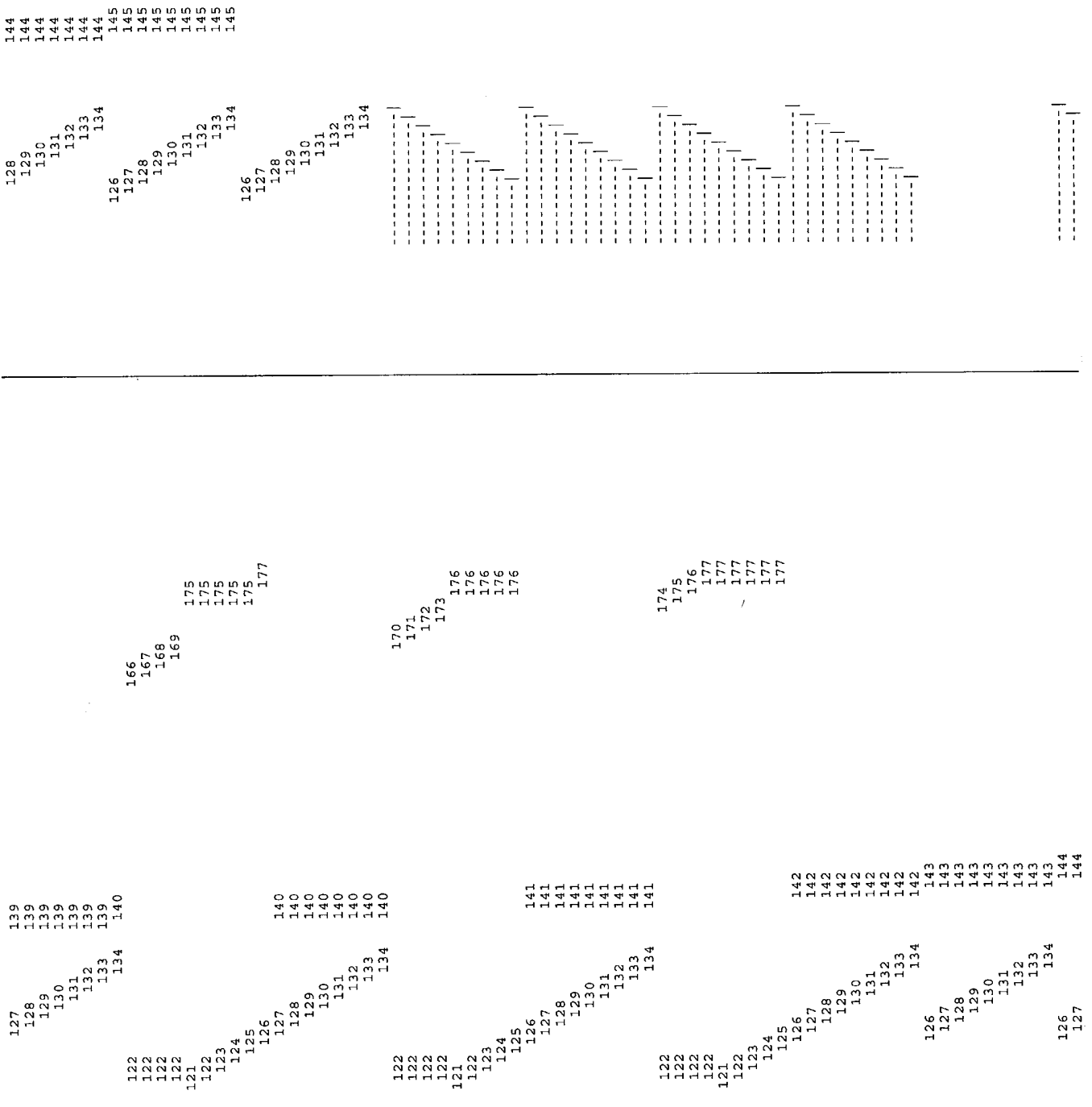






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181 IGFGYCGAGCQSGGCDGVFAEAIAANSTLVAE

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999 matches found in sequence:  
aar45358 : Wheat germ agglutinin isolectin WGA-A.  
(from "lectins.pep")  
TOIG of: aar45358 check: 1976 from: 1 to: 212

ID AAR45358 standard; protein; 212 AA.  
XX  
AC AAR45358;  
XX  
DT 16-OCT-2003 (revised)  
DT 06-JUL-1994 (first entry)  
XX  
DE Wheat germ agglutinin isolectin WGA-A.  
XX  
KW Transgenic plant; leaf; leaves; insecticidal; fungicidal; properties;  
KW tobacco; gramineae.  
XX  
OS Triticum aestivum; L.  
XX  
PN US5276269-A.

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XX
PD 04-JAN-1994.
XX
XX 20-JUL-1992; 92US-00917665.
XX
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XX 12-SEP-1989; 89US-00406318.
XX
XX (UNMS ) UNIV MICHIGAN STATE.
XX
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XX PI Raikhel NV;
XX
XX WPI; 1994-016167/02.
XX
XX N-PSDB; AAQ54432.
XX
XX
XX PT Transgenic plant contg. cDNA encoding wheat or barley lectin - has
XX PT insecticidal properties in its leaves.
XX
XX PS Disclosure; Fig 6; 26pp; English.
XX
XX
XX CC The sequence is that of wheat germ agglutinin isolectin A, WGA-A, which
XX CC may be expressed in transgenic plants to provide plants (pref. tobacco)
XX CC having insecticidal and fungicidal properties in their leaves. (updated
XX CC on 16-OCT-2003 to standardise OS field)
XX
XX SQ Sequence 212 AA;
XX
AAK45358 Length: 212 September 16, 2004 14:53 Type: P Check: 1976 ..
Found using 'pepl' (collins496.key)

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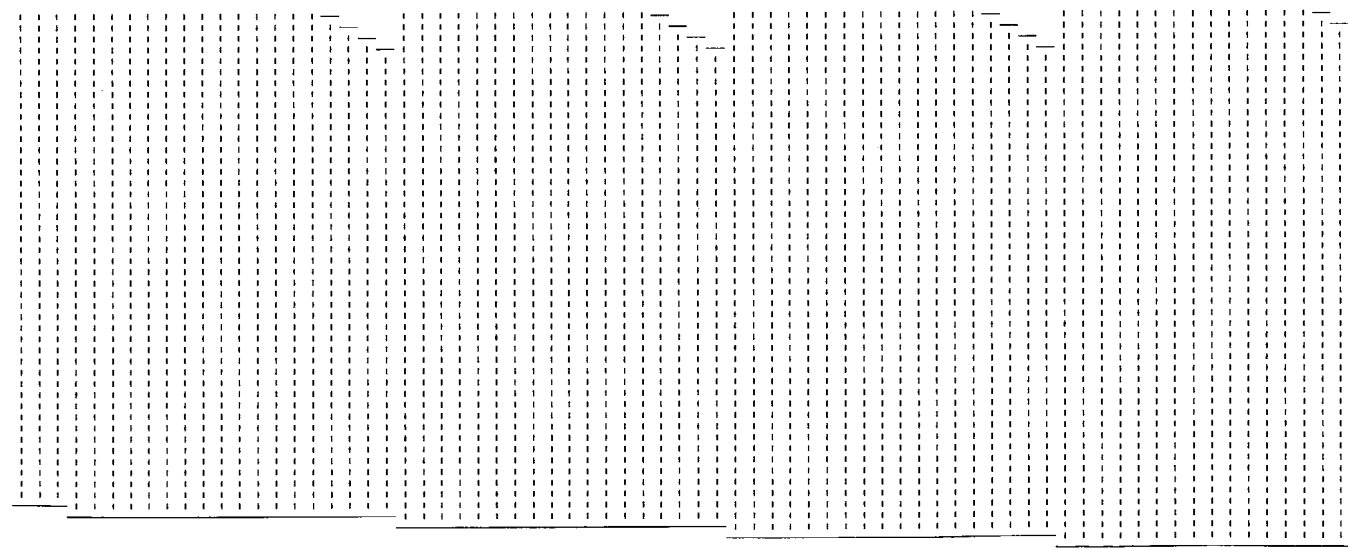
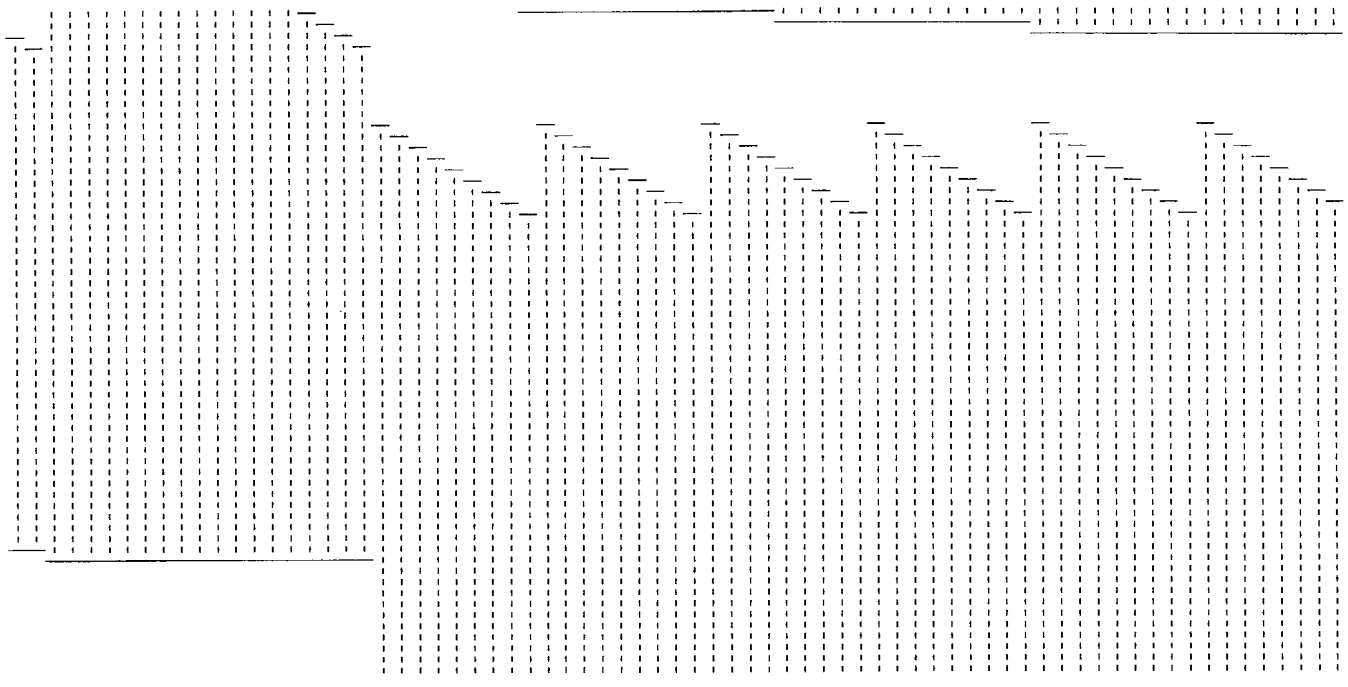


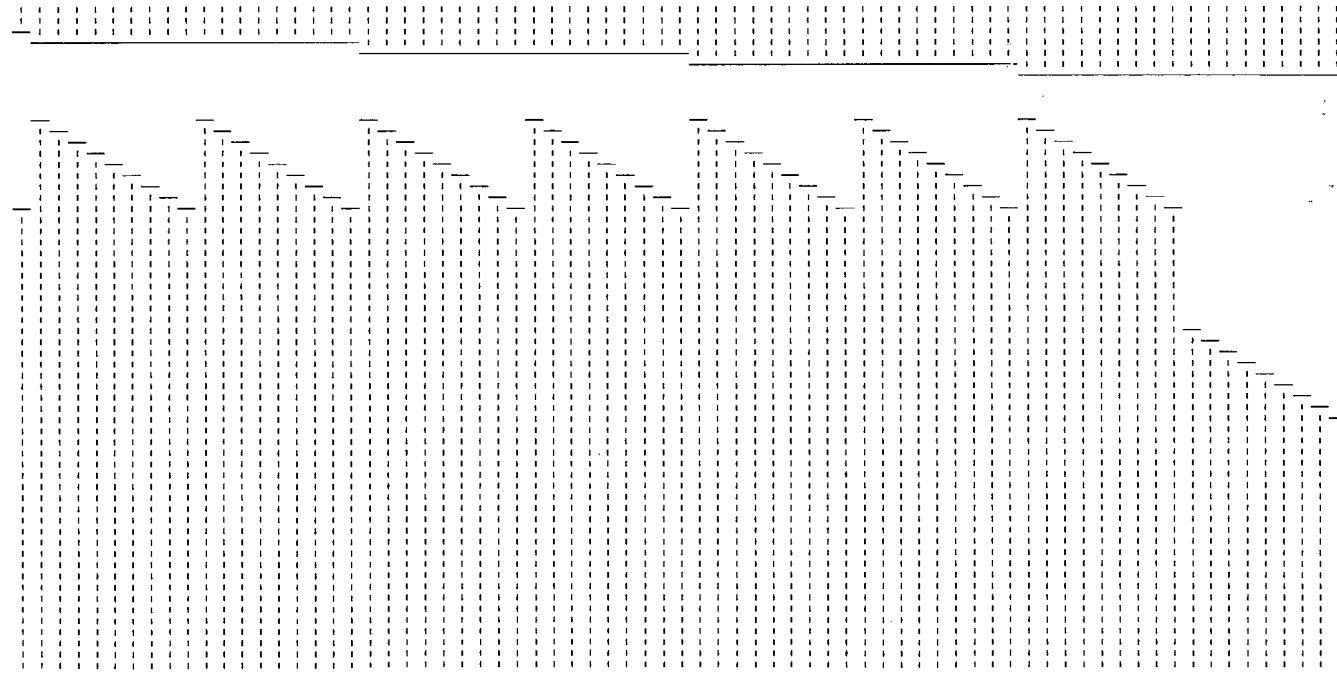
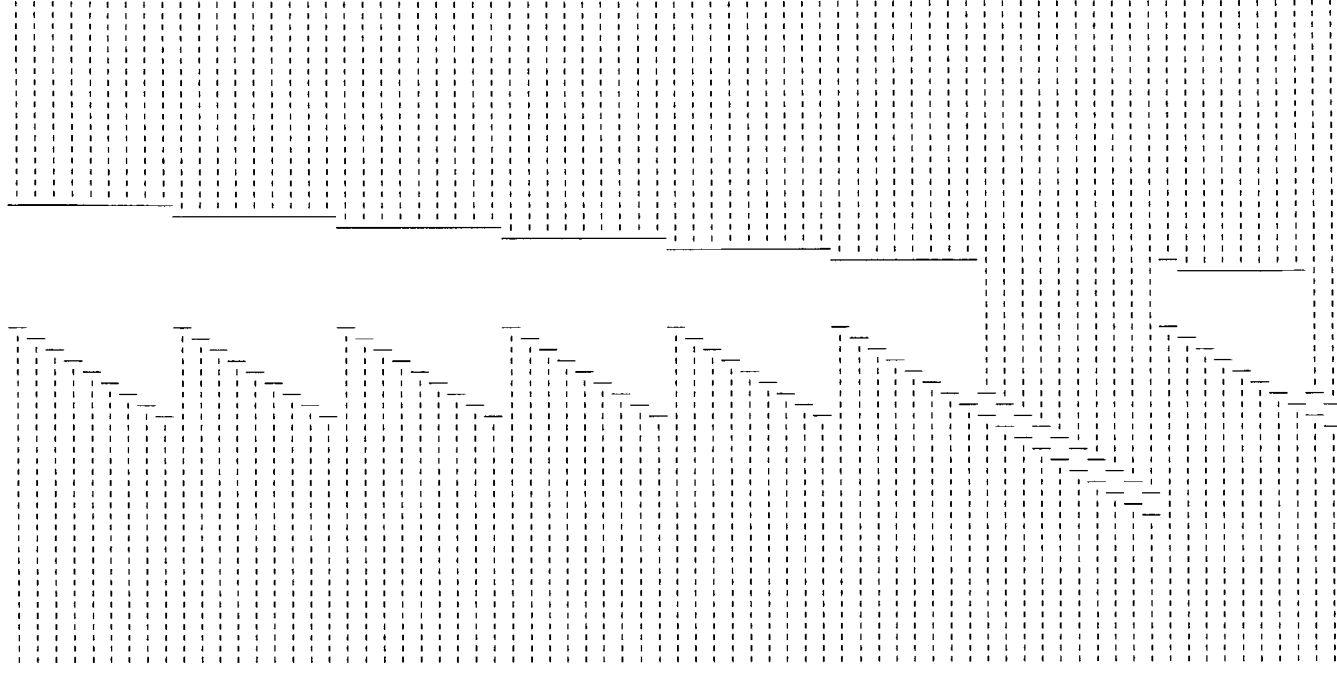
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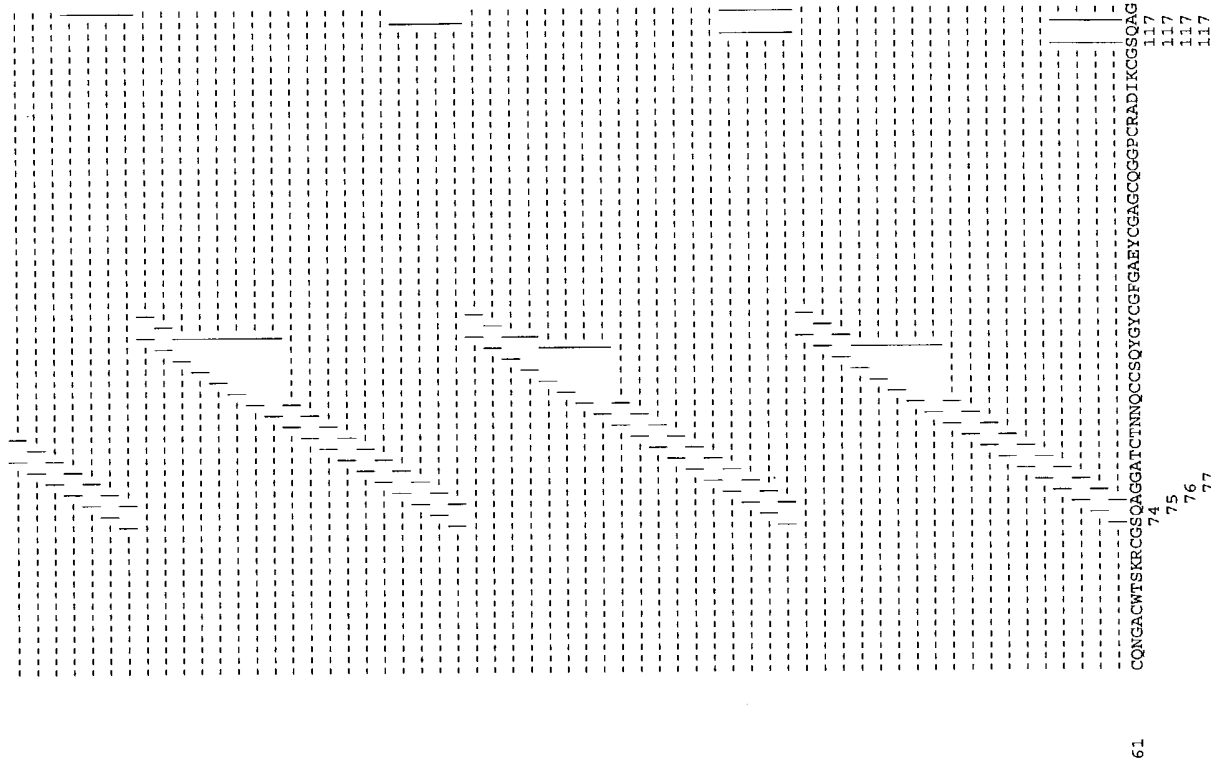
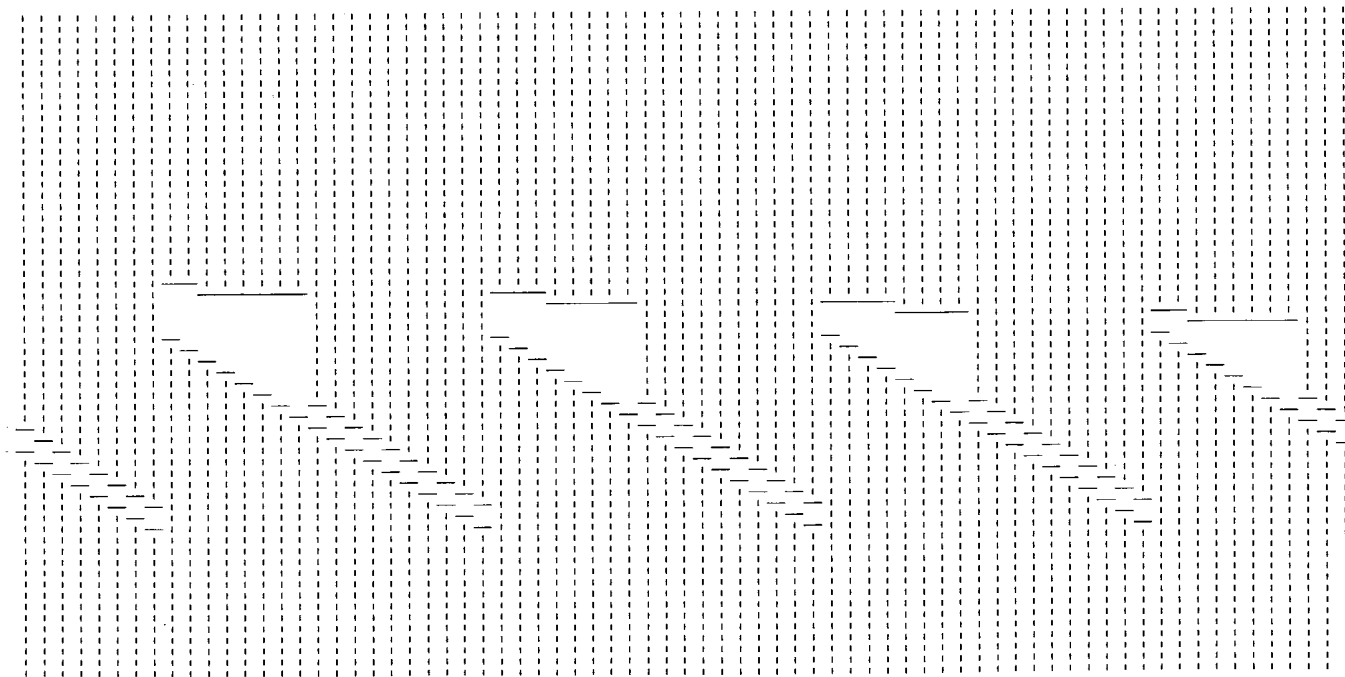
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CONGACWTSKRCGSQAGGATCTNNQCCSYGYGFGAEGYCGAGCQGGPCRADIKCGSQAG  
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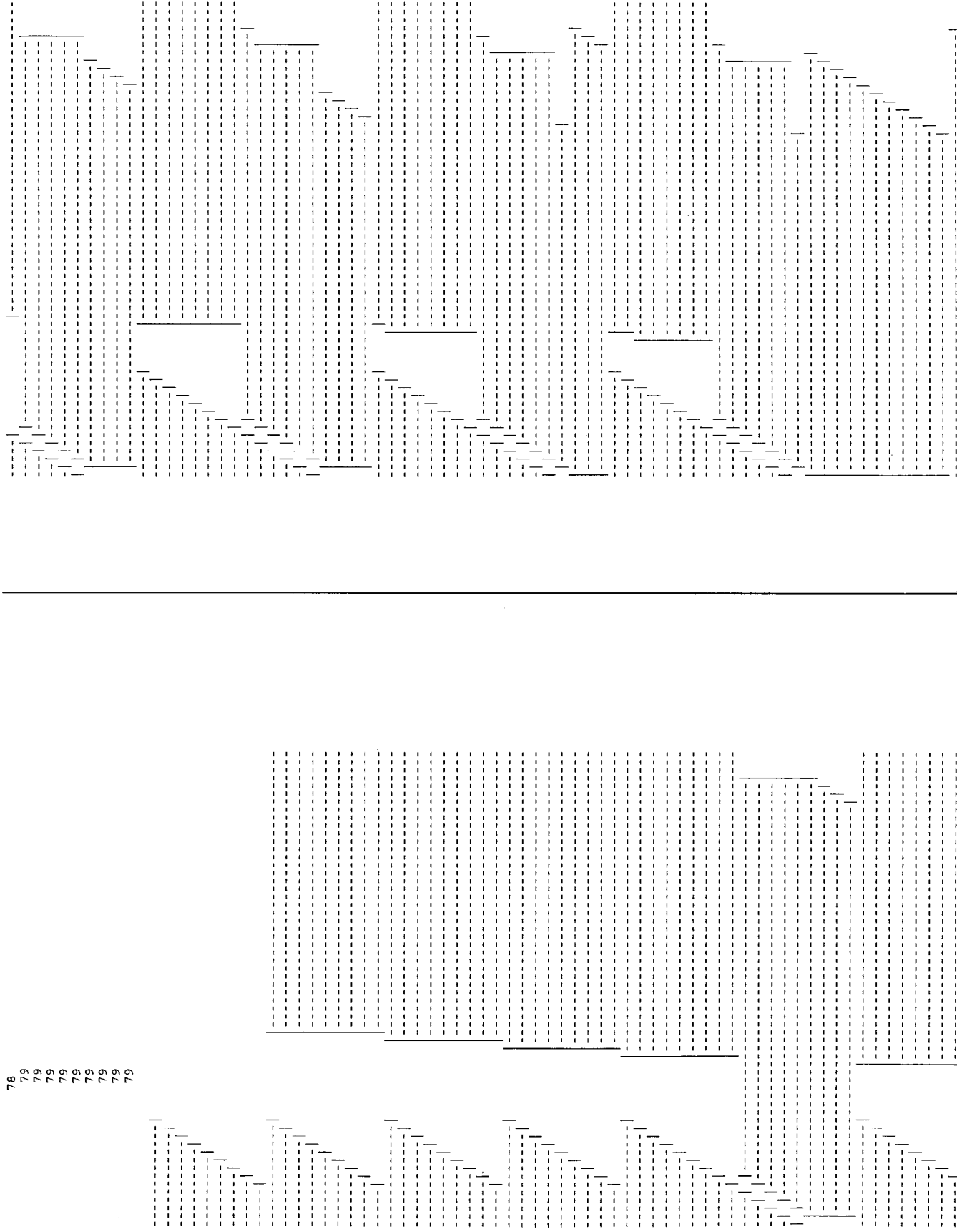
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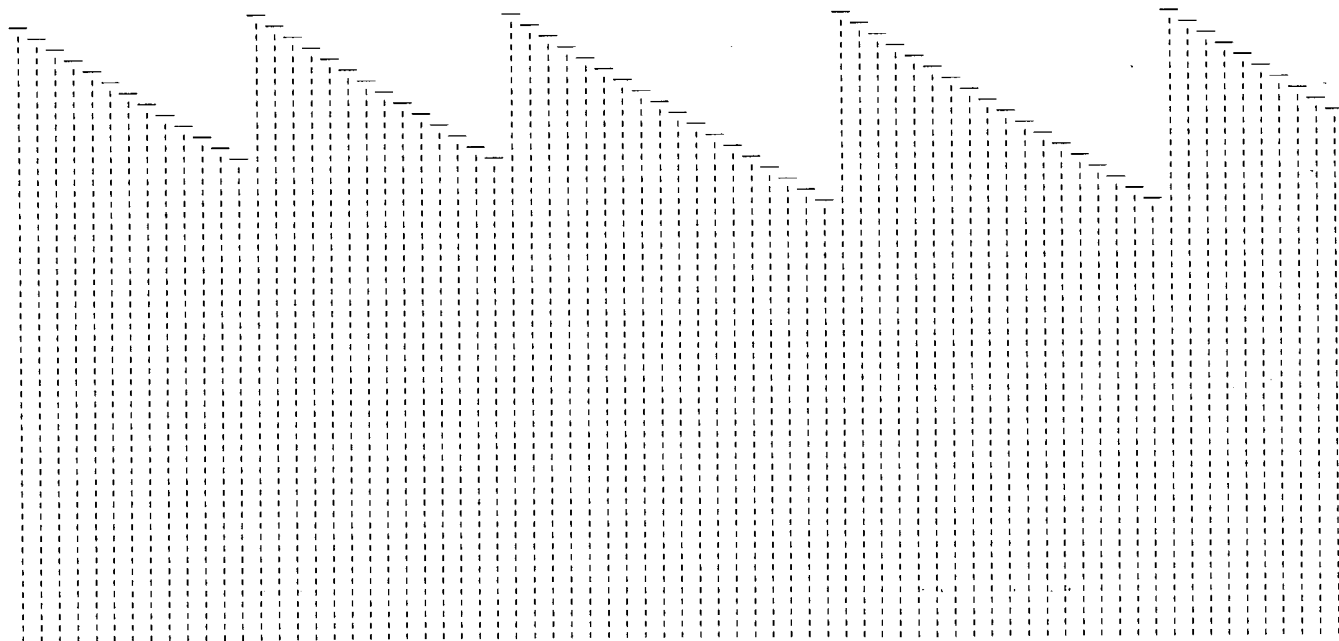
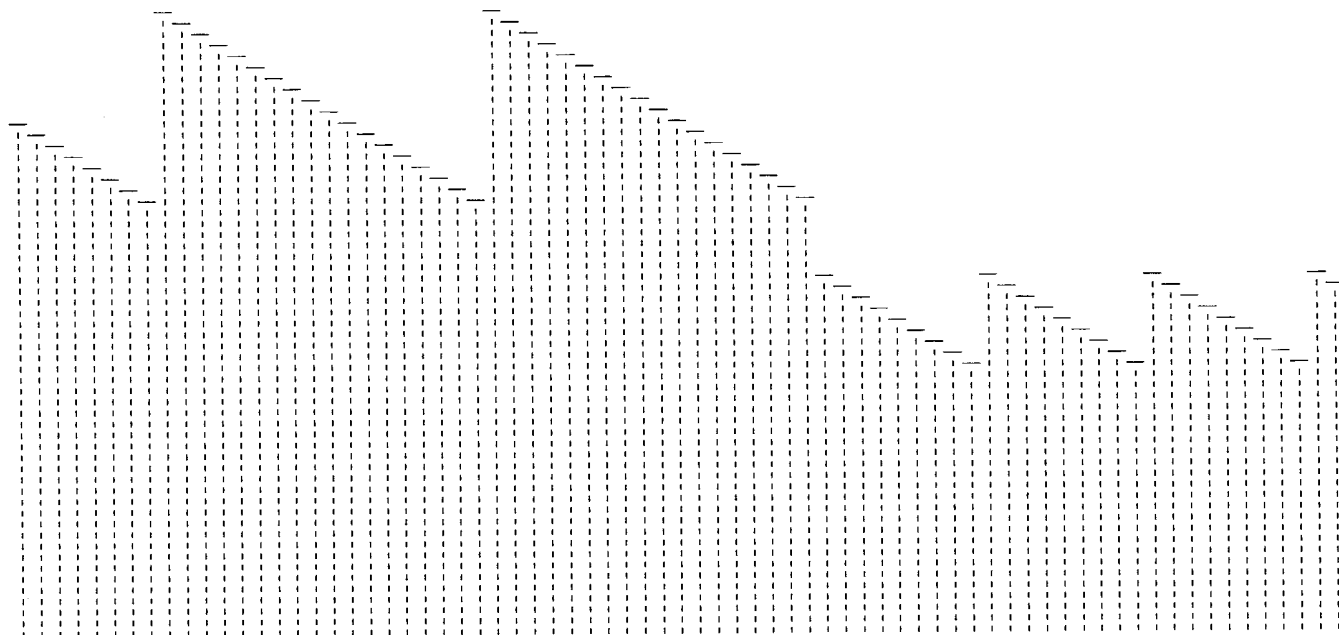


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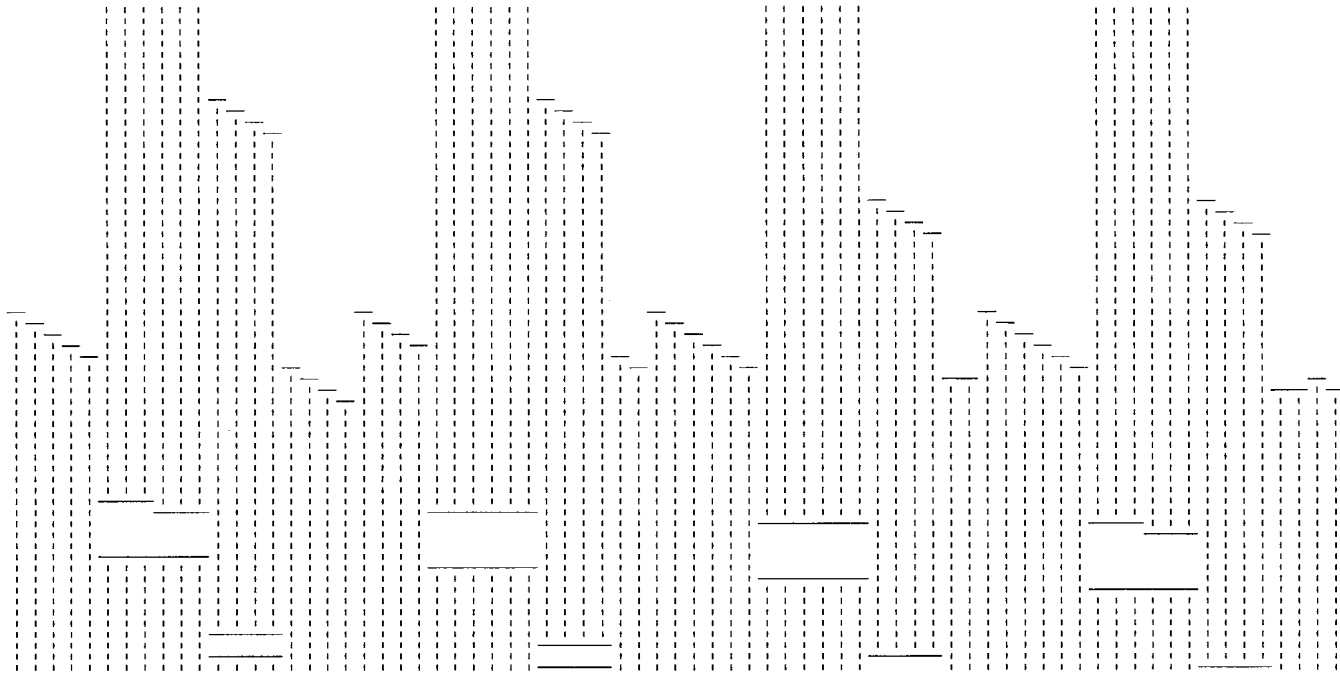
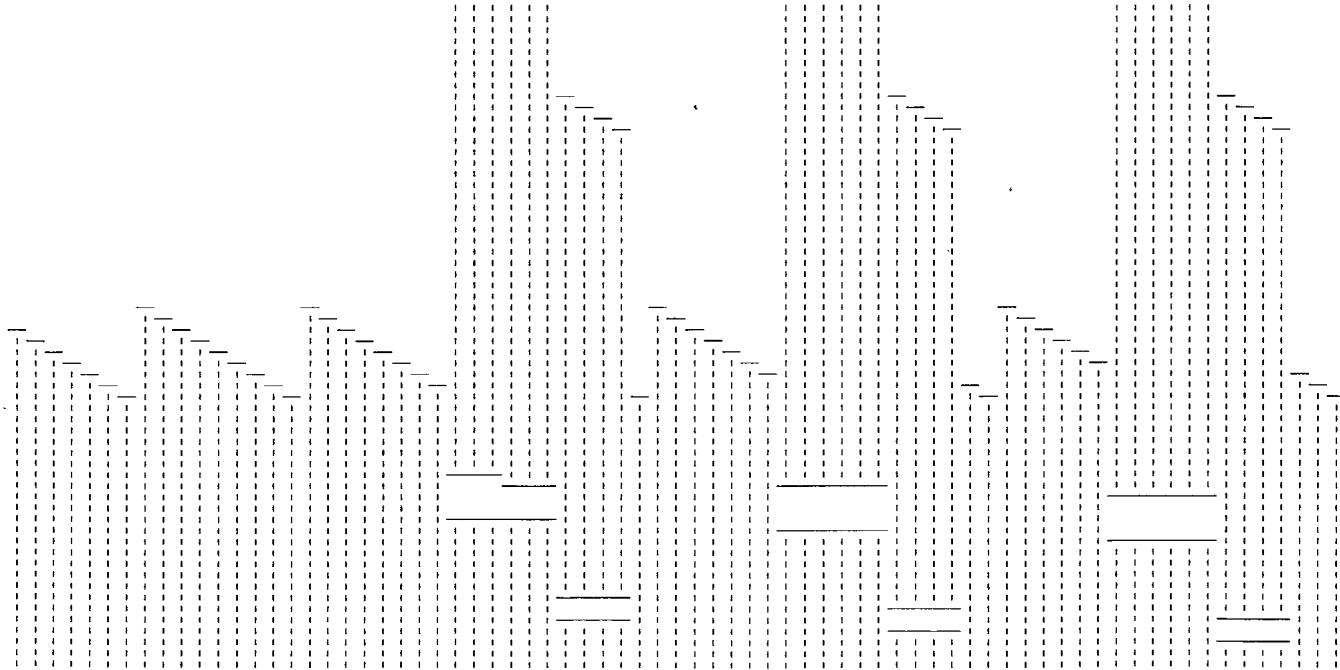


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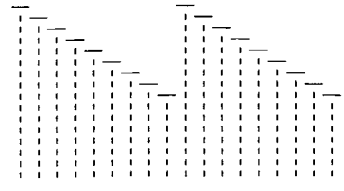
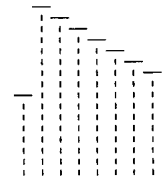
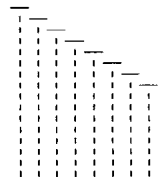
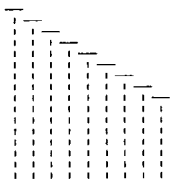
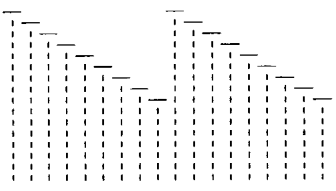
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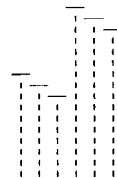
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999 matches found in sequence:  
aar45359 ; Wheat germ agglutinin isolectin WGA-D.  
(from "lectins.pep")  
TOIG of: aar45359 check: 3216 from: 1 to: 213

ID AAR45359 standard; protein; 213 AA.  
XX  
AC AAR45359;  
XX  
DT 16-OCT-2003 (revised)  
DT 06-JUL-1994 (first entry)  
XX  
XX Wheat germ agglutinin isolectin WGA-D.  
DE  
XX  
KW Transgenic plant; leaf; leaves; insecticidal; fungicidal; properties;  
KW tobacco; gramineae.  
XX  
OS Triticum aestivum; L.  
XX  
FN US5276269-A.  
XX  
PD 04-JAN-1994.  
XX  
PF 20-JUL-1992; 92US-00917665.  
XX  
PR 12-SEP-1989; 89US-00406318.  
XX  
PA (UNMS ) UNIV MICHIGAN STATE.  
XX  
PI Raikhel NV;  
XX  
DR WPI; 1994-016167/02.  
DR N-PSDB; AAQ54433.  
XX  
PT Transgenic plant contg. cDNA encoding wheat or barley lectin - has  
PT insecticidal properties in its leaves.  
XX  
PS Disclosure; Fig 6; 26pp; English.  
XX  
CC The sequence is that of wheat germ agglutinin isolectin A, WGA-D, which  
CC may be expressed in transgenic plants to provide plants (pref. tobacco)  
CC having insecticidal and fungicidal properties in their leaves. (Updated  
CC on 16-OCT-2003 to standardise OS field)  
XX  
SQ Sequence 213 AA;

AAR45359 Length: 213 September 16, 2004 14:53 Type: P Check: 3216 ..  
Found using 'pepl' (collins496.key)

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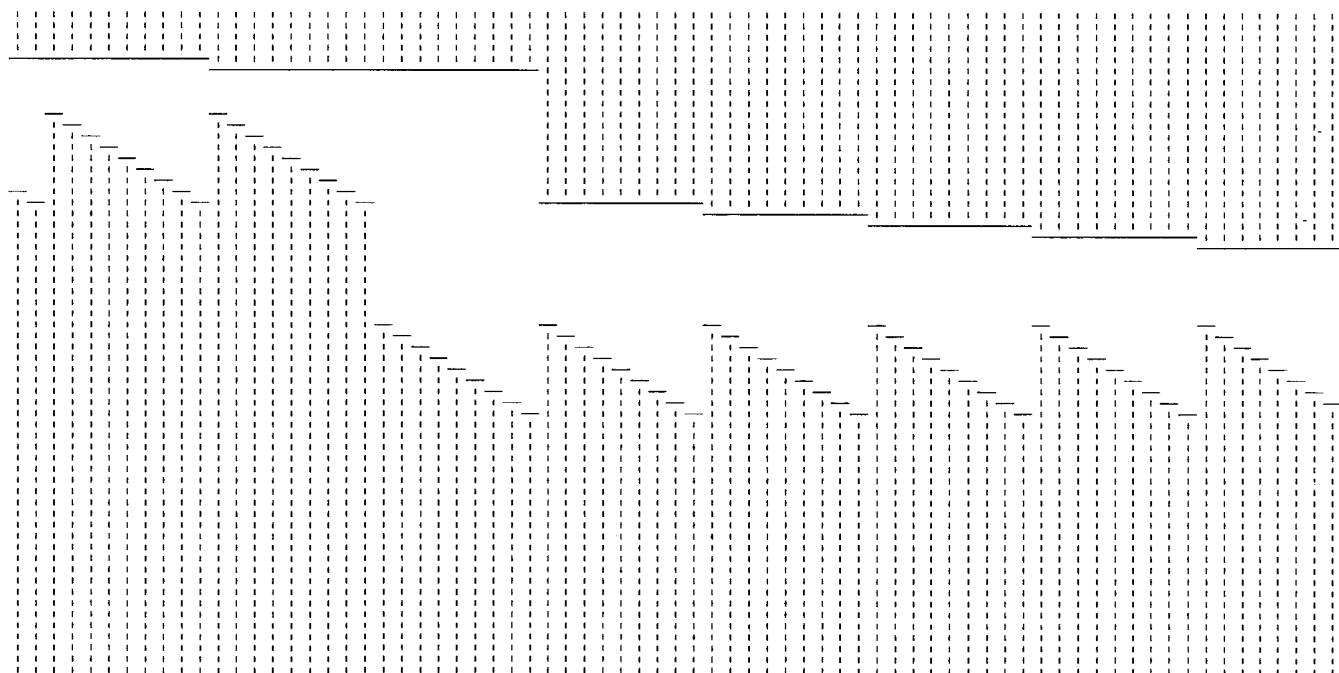
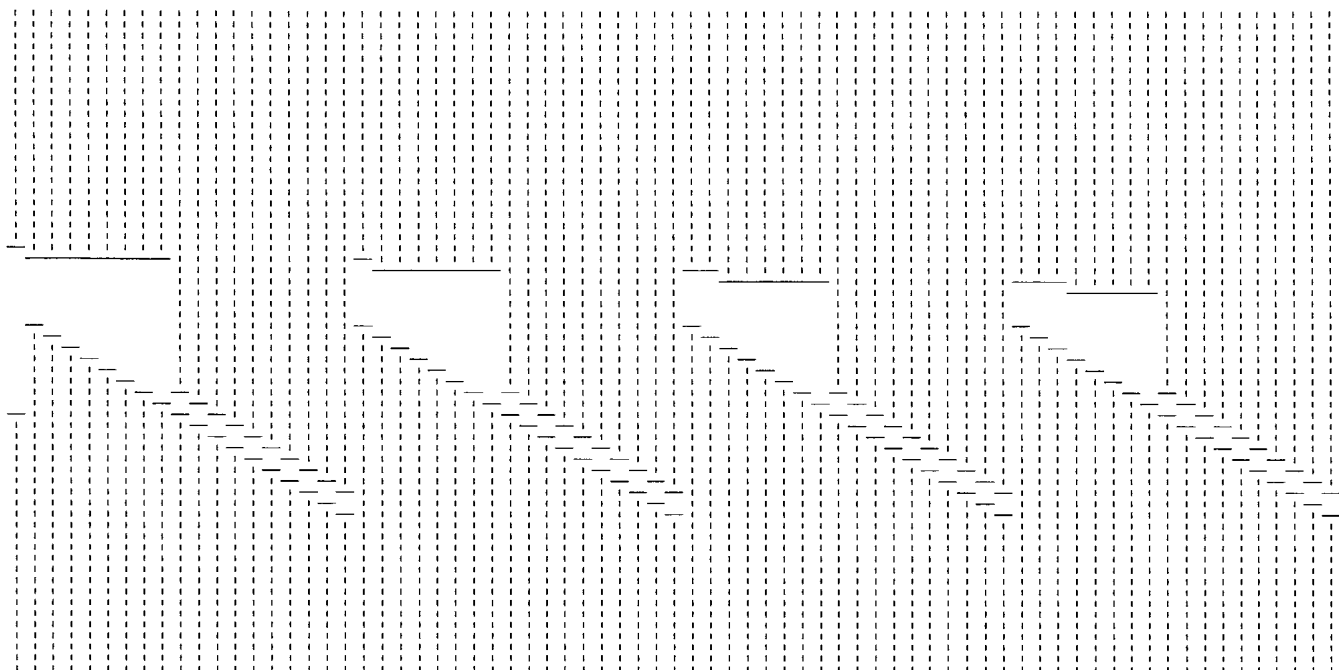


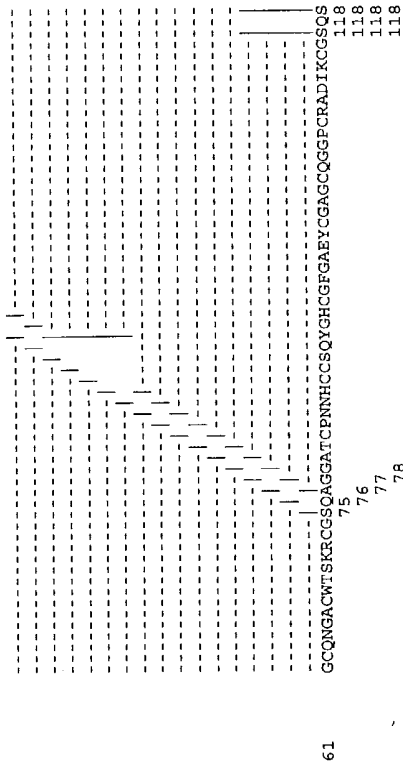
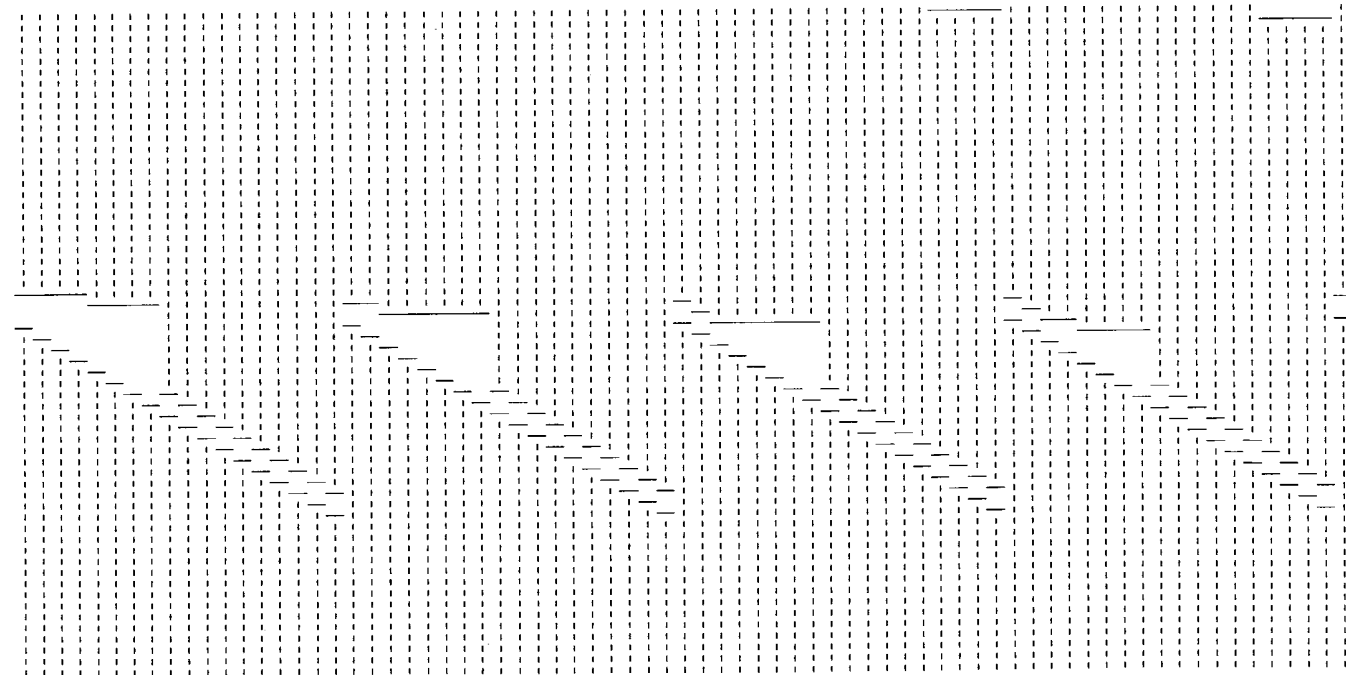


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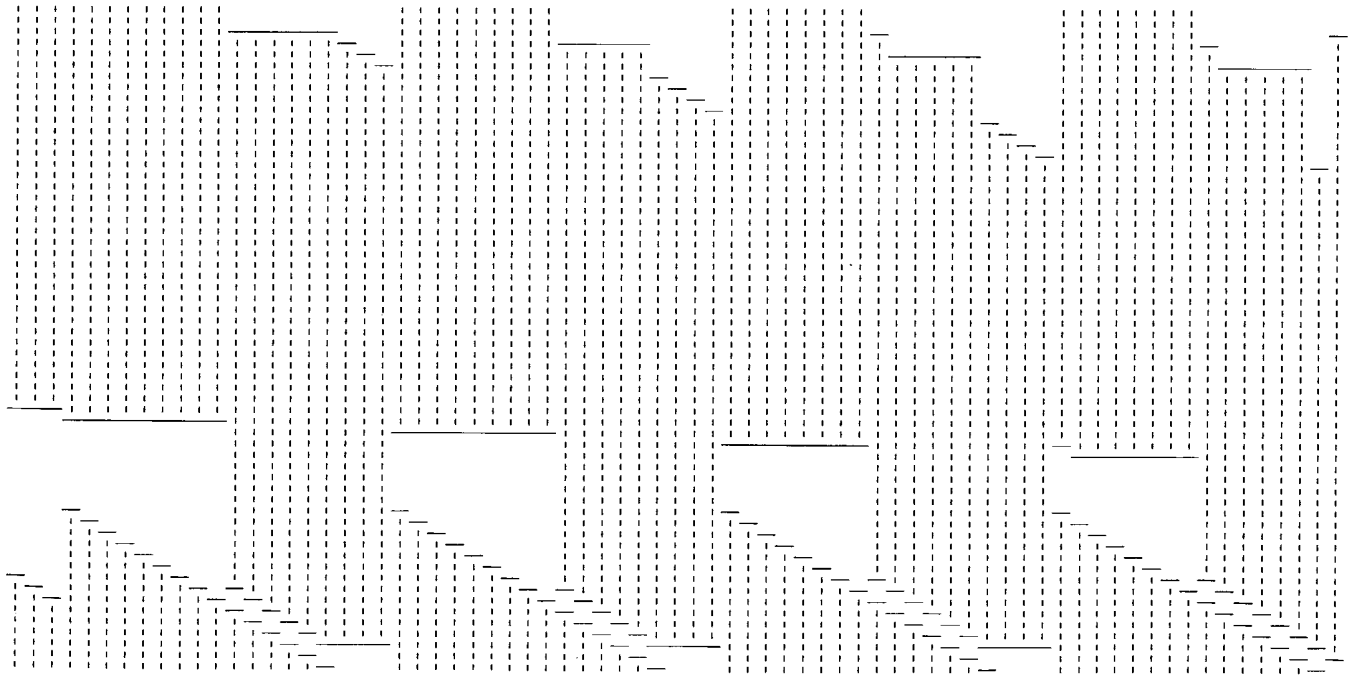
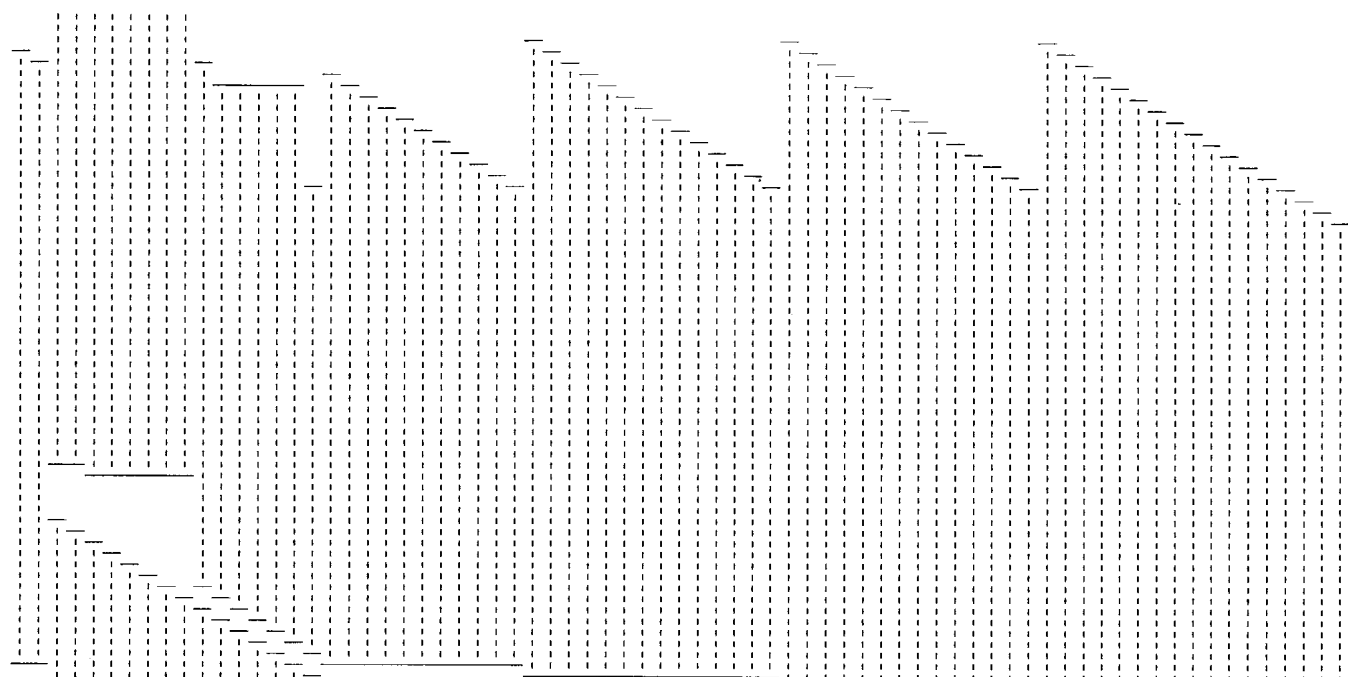
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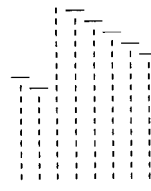
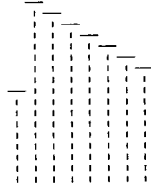
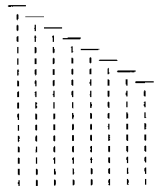
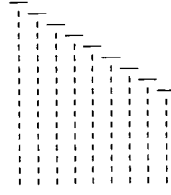
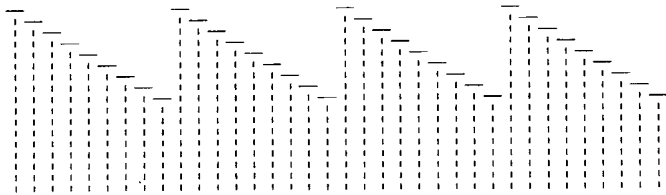
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